

NEW SPECIES AND A NEW GENUS OF DERAEO-
CORINAE FROM NORTH AMERICA
(HEMIPTERA, MIRIDAE).¹

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The present paper describes two new species and a variety of *Deraeocoris*, two new species of *Eustictus*, two new species of *Eurychiloptera*, and a new genus and species allied to *Eurychiloptera*, all belonging to the Mirid subfamily Deraeocorinae.

Deraeocoris piceicola n. sp.

Runs in my key (Univ. Minn. Agr. Expt. Sta., Tech. Bul. 1, 1921, p. 111) to the couplet with *incertus* Knigt., but differs in the much larger size and structure of the genital claspers; size and aspect of *laricicola*, but differs in the punctate scutellum, genital claspers, and paler membrane.

♂. Length 7.3 mm., width 2.9 mm. Head: width 1.18 mm., vertex .58 mm.; eyes and shape of head much as in *laricicola* but frons more prominent and convex; black, a nearly triangular pale spot in middle of vertex, pale on basal angles of juga. Rostrum, length 2.8 mm., attaining posterior margins of the middle coxae, piceous, paler at the joints. Antennae: segment I, length .56 mm.; II, 1.9 mm., cylindrical, scarcely equal to thickness of segment I, exerted hairs nearly equal to one and one-half times thickness of segment; III, .77 mm.; IV, .56 mm.; black, somewhat shining. Pronotum: length 1.51 mm.; width at base 2.36 mm., anterior angles 1.03 mm., collar .86 mm.; somewhat more densely punctate than *laricicola*, chiefly black, the median line irregularly indicated in pale on basal half. Scutellum black, shining, basal angles and apex pale, rather shallowly and coarsely punctate, a short pubescent hair arising from each puncture. Pubescence nearly as in *laricicola*, coloration more distinctly black although hemelytra have pale areas. Membrane pale, veins and invading membrane each side fuscous, apical half infuscated but the central area not darkened as in *laricicola*. Ventral surface and legs black, hind femora somewhat paler, tibiae biannulate with paler. Genital claspers distinctive, left clasper nearly as in *kennicotti*, but right clasper longer, more gradually tapered from base toward apex.

¹ Contribution from the Department of Zoology and Entomology, Iowa State College, Ames, Iowa.

♀. Length 6.9 mm., width 3.2 mm. Head: width 1.24 mm., vertex .62 mm. Antennae: segment I, length .59 mm.; II, 2.04 mm.; III, .80 mm.; IV, .56 mm. Pronotum: length 1.36 mm., width at base 2.26 mm., collar .86 mm. More robust than the male, hemelytra shorter, membrane not or scarcely covering apex of abdomen; coloration somewhat lighter, median line of frons pale and usually joining with the white triangular mark on vertex, venter with some pale on each segment.

Holotype: ♂ August 20, 1925, Pingree Park, alt. 9,000 ft., Colorado (H. H. Knight); author's collection. *Allotype*: same data as the type. *Paratypes*: 3 ♂ 9 ♀, taken with the types on spruce (*Picea*), only on trees badly infested with aphid galls. COLORADO—♀, topotypic, Aug. 20, 1924 (Drake & Hottes). 14 ♂ ♀ Aug. 1, 1900, Rices Spur; 2 ♂ Aug., 1900, Rico (E. D. Ball). BRITISH COLUMBIA—♀ Aug. 8, 1913, Simpson Pass; ♀ Aug. 14, 1921, Barkerville (E. R. Buckell). ♂ July 20, 1926, Revelstoke, alt. 6,000 ft. (J. McDunnough).

***Deraeocoris balli* n. sp.**

Allied to *vanduzeei* Kngt., but differs in having longer antennae, segment II greater than width of head plus width of vertex, scutellum not so abruptly convex, while scutellum and calli are uniformly yellowish red. In my key to the species of *Deraeocoris* (Minn. Agr. Expt. Sta., Tech. Bul. 1, 1921, p. 173), *balli* runs to couplet 6 where it does not agree with either section due to the uniformly yellowish red calli.

♀. Length 5.8 mm., width 2.9 mm. Head: width 1.03 mm., vertex .53 mm.; yellowish to reddish brown, without black marks. Rostrum, length 2.4 mm., reaching to middle of hind coxae, yellowish to brownish. Antennae: segment I, length .50 mm.; II, 1.63 mm., more distinctly thickened on the apical one-fifth than in *vanduzeei*, yellowish to reddish, the thickened portion blackish, apparently more sparsely clothed with long hairs than *vanduzeei*; III, .74 mm., brownish to fuscous; IV, broken. Pronotum: length 1.33 mm., width at base 2.31 mm.; punctuation and the long, erect yellowish pubescence much as in *vanduzeei*, but calli and disk uniformly reddish yellow; basal margin and more broadly on lateral margins pale to yellowish. Scutellum strongly convex but not so abruptly at sides and apex as in *vanduzeei*; uniformly reddish brown, smooth, shining, set with erect yellowish hairs.

Hemelytra shining, strongly punctate much as in *vanduzeei*, but clothed with longer and more prominent erect yellowish hairs; apical area and spot on middle and base of corium dark brown to fusco-brownish, apical area of embolium reddish to dark brown, apex and more broadly on basal area of clavus dark brownish, otherwise pale to yellowish between the punctures and dark areas. Cuneus red, basal half chiefly pale, narrow base invaded by the dark color on apex of corium. Membrane clear with a tinge of brownish, veins brown, darker at tip of smaller areole, anal area dark. Legs pale to yellowish, femora reddish on apical half although indistinctly biannulate with pale near apex; tibiae biannulate on basal half with reddish, basal band oblique and very narrow; tarsi yellowish, tips darker, claws dark brown and deeply cleft; clothed with erect long hairs as in *vanduzeei*. Venter yellowish to reddish, the red color prominent on sides and on the genital segments.

Holotype: ♀ August 3, 1900, Dolores, Colorado (E. D. Ball); author's collection. Dedicated in honor of the collector, Dr. E. D. Ball, who favored the writer with some remnants of unmounted Hemiptera which he collected more than twenty-five years ago. Dr. Ball's notes on this lot of Hemiptera state: "Pretty red Capsid on *Rhus elabca*." The collection was made on terrain described as follows: "Just back of the town is a low mesa with occasional clumps of scrub oak and sarviceberry, a few shrubs of sumac, with a sparse desert covering of shad scale and other Atriplex, very sandy, very dry, and barren."

***Deraeocoris triannulipes flavisignatus* n. var.**

Differs from typical *triannulipes* in having median line of pronotal disk pale, also more or less pale on lateral submargins of disk; apical half of membrane dark fuscous, set off from the areoles by a transverse paler area. Slightly larger and of deeper black color than the typical form from Colorado, still the pale rays on pronotal disk persist in this more eastern form. Apparently only a variety or race of *triannulipes*, although a slight difference can be detected in the genital claspers.

♂. Length 6.5 mm., width 3 mm. Head: width 1.11 mm., vertex .56 mm. Rostrum, length 2.1 mm., extending only slightly beyond hind margin of sternum. Antennae: segment I, length .50 mm.; II, 1.48 mm.; III, .62 mm.; IV, .56 mm. Pronotum: length 1.45 mm., width at base 2.5 mm. Very similar to the male in coloration, punctuation and pubescence.

Holotype: ♂ July 8, 1921, St. Anthony Park, Minnesota (H. H. Knight); author's collection. *Allotype*: topotypic. *Paratype*: ♂, taken with type at light. ♀ July 2, 1919, Mille Lacs County, Minnesota (V. R. Haber). ♀, Marquette, Michigan, "col. in washup."

***Eustictus albocuneatus* n. sp.**

Distinguished from other members of the genus by the opaque white cuneus with black apex, and by the abbreviated black membrane.

♀. Length 6.1 mm., width 2.43 mm. Head: width 1.09 mm., vertex .44 mm., black. Rostrum, length 3.2 mm., extending slightly beyond posterior margins of hind coxae. Antennae: segment I, length .98 mm., pale, blackish only on extreme apex, set with several erect pale hairs which in length are nearly equal to twice the thickness of segment, an obscure fuscous point at base of each; II, 3.25 mm., pale to dusky, only minute setigerous fuscous points are apparent, clothed with fine, short pale pubescence, while five or six erect hairs arise near base; III, 1.91 mm., pale, dusky on basal one-third, also with minute fuscous points; IV, missing. Pronotum: length .99 mm., width at base 1.76 mm.; margined laterally by a white calloused carina, yellowish to fuscous, anterior half of disk including calli and collar, black.

Dorsum set with many, rather uniformly spaced, long, erect, yellowish hairs, present on cuneus and scutellum but not on embolium. Ground color pale yellowish to brownish, head, anterior half of pronotal disk, scutellum, inner apical area of corium, apex of cuneus, black; extreme edge of embolium black; cuneus except apex, opaque white. Membrane abbreviated, just attaining apex of abdomen, uniformly dark brownish black. Legs pale yellowish to brownish; tibiae with a black line on dorsal margin, becoming obsolete apically, the black line bordered with white; hind tibiae black with two white lines only near base. Venter yellowish to brownish and reddish, becoming black on genital segments and more or less on sides. Tibiae and femora set with erect long hairs, several on tibiae nearly equal to three times thickness of tibia.

Holotype: ♀ June 17, 1926, Tucson, Arizona (A. A. Nichol); author's collection.

***Eustictus tibialis* n. sp.**

Allied to *necopinus* Kngt., but differs in that length of antennal segment III is scarcely equal to width of head; hind tibiae black,

pale only at base and apex; antennal segment I is longer while segment III is shorter than in *necopinus*.

♀. Length 6.6 mm., width 2.6 mm. Head: width 1.11 mm., vertex .46 mm.; median line of vertex not so deeply grooved as in *necopinus*. Rostrum, length 2.84 mm., scarcely attaining posterior margins of hind coxae. Antennae: segment I, length .95 mm., thickness .178 mm., blackish, with a few obscure transverse pale marks, clothed with very fine, short pale pubescence; II, 2.4 mm., more slender at base, thickness .103 mm., tapering to thicker (.148 mm.) at apex, brownish black; III, 1.09 mm., thickness .118 mm., blackish, apical one-fourth pale to yellowish; IV, 1.02 mm., thickness .148 mm., blackish. Pronotum, length 1.27 mm., width at base 2.16 mm., black, extreme basal edge pale, a small paler patch near basal angles.

Pubescence and punctuation nearly as in *necopinus*, coloration of scutellum and hemelytra nearly the same. Differs in color of the legs, tibiae black, pale only at base and apex; femora blackish on apical half, hind pair with only one distinct, subapical pale mark on posterior face.

Holotype: ♀ June 23, 1917, Richmond, Texas (H. H. Knight); author's collection. *Paratype*: ♀, taken with type at light.

***Eurychlopterella barberi* n. sp.**

Differs from *luridula* Reuter in the smaller size, shorter second antennal segment, longer head, and the uniformly dark pronotum and scutellum.

♀. Length 3.3 mm., width 1.27 mm. Head: width .63 mm., vertex .296 mm., length .65 mm., extending .37 mm. beyond front margins of eyes; horizontal, sharply conical, gula slightly sulcate, eyes just reaching lower margin; smooth shining, uniformly yellowish, finely pale pubescent. Rostrum, length 2 mm., reaching base of ovipositor, yellowish brown. Antennae: segment I, length .18 mm.; II, .66 mm., slender, rather sharply thickened at apex; III, .266 mm.; IV, .31 mm.; yellowish, becoming fuscous on last two segments. Pronotum: length .73 mm., width at base 1.12 mm.; coarsely and closely punctate, shining, clothed with shorter pale pubescence than in *luridula*, lateral margins also sharper and more nearly straight; brownish black, impunctate, transversely rugulose, shining, finely pubescent.

Dorsum clothed with fine, pale, moderately prominent pubescence. Hemelytra pale yellowish translucent, corium

and inner half of cuneus dark brown; membrane and veins uniformly pale brownish. Embolium narrower and margins more nearly straight than in *luridula*. Ventral surface of body dark brown; legs rather uniformly yellowish; hind tibia slightly curved.

Holotype: ♀ July 23, 1905, Huachucha Mts., Arizona (H. G. Barber); author's collection. *Paratype*: ♀, topotypic, Aug. 3, 1905 (H. G. Barber). Named in honor of the collector, Mr. H. G. Barber, who has very kindly favored the author with several interesting new species from Arizona.

***Eurychlopterella brunneata* n. sp.**

Distinguished from *luridula* Reuter by the uniformly fuscous brown coloration, longer head and larger size.

♂. Length 4.7 mm., width 2.1 mm. Head: width .86 mm., vertex .385 mm., length .71 mm., extending .44 mm. beyond front margins of eyes; horizontal, flattened beneath, gula slightly sulcate, lower margin of eyes extending slightly below the gula. Rostrum, length 3.2 mm., reaching to base of genital segment. Antennae: segment I, length .29 mm., more slender on basal half; II, 1.26 mm., cylindrical, equal to thickness of segment I; III, .44 mm.; IV, .36 mm.; last two segments slender. Pronotum: length 1.18 mm., width at base 1.77 mm.; disk more distinctly flattened than in *luridula*, coarsely and closely punctate; calli confluent, smooth, smaller than in *luridula*.

Dark fuscous brown, pronotum slightly darker, head, collar, and legs more yellowish brown; membrane and veins uniformly brownish. Clothed with thickly set, erect, rather long yellowish brown pubescence. Genital structures very similar to those of *luridula*.

Holotype: ♂ Aug. 17, Clay City, Illinois; author's collection.

***Conocephalocoris* n. gen.**

Allied to *Eurychlopterella* Reuter, but head longer and more cone-shaped; antennal segment III about equal to segment IV (in *Eurychlopterella* segment III distinctly longer than IV); antennal segment II thick, equal to thickness of segment I in both sexes; pronotum rather sparsely punctate, lateral margins of disk ecarinate; claws not distinctly cleft, arolia bristle-like and typical of subfamily Deraeocorinae; male genital segment apparently normally twisted to the left side. Genotype: *Conocephalocoris nasicus* new species.

Conocephalocoris nasicus n. sp.

♀. Length 4.4 mm., width 1.45 mm. Head: width .65 mm., vertex .37 mm., length .74 mm., extending .47 mm. beyond front margins of eyes; horizontal, sharply conical, gula flattened and more or less sulcate; basal carina scarcely distinguished, vertex with a broad impression near dorsal margin of eye and extending more shallowly across median line; eyes rather small, sparsely clothed with pubescent hairs, height .296 mm., width .78 mm.; base of antenna arising .148 mm. before front margin of eye, apex of segment I just able to reach apex of tylus; impunctate, vertex more or less alutaceous, sparsely pale pubescent; tylus long, prominent, approaching horizontal. Rostrum, length 2.72 mm., reaching slightly beyond middle of venter, uniformly brown. Antennae: segment I, length .296 mm., width .089 mm., barely reaching apex of tylus; II, 1.39 mm., cylindrical, equal to thickness of segment I, clothed with prominent pale pubescent hairs, length of some hairs equal to thickness of segment; III, .326 mm., thickness .059 mm., with prominent pubescent hairs; IV, .31 mm., slightly more slender than III. Pronotum: length .80 mm., width at base 1.24 mm.; calli prominent, confluent, disk coarsely but rather sparsely punctate, lateral margins ecarinate; collar rather flat, stricture distinct and punctate. Scutellum moderately convex, impunctate, minutely rugulose, somewhat shining, finely pubescent, set with a few erect long hairs as on hemelytra.

General coloration yellowish brown, calli and sternum darker brown; clothed with yellowish simple pubescence, dorsum set with sparsely spaced erect long hairs, forming three or four more or less distinct rows on corium and two rows on clavus. Hemelytra much as in *Eurychiloptera*, impunctate, shining, embolium narrower, yellowish translucent, otherwise uniformly yellowish brown; membrane clear with a tinge of brownish, veins scarcely darker, extending beyond apex of cuneus for a distance slightly greater than length of cuneus. Ostiolar peritreme opaque, finely granulate, the canal ending laterally in a small shining knob which is much smaller and not plate-like as in *Eurychiloptera*.

♂. Length 4.4 mm., width 1.3 mm. Head: width .64 mm., vertex .36 mm., length .78 mm., eyes and form nearly as in the female. Antennae: segment I, length .237 mm.; II, 1.26 mm., equal to thickness of segment I although somewhat more slender near base; III, .32 mm.; IV, .32 mm. Pronotum: length .75 mm., width at base 1.2 mm. Very similar to the female in form, pubescence, and punctuation,

but uniformly dark brown in color. Genital structures very similar to those of *Eurychlopterella* but the apex of segment turned slightly to the left, apparently in a normal position.

Holotype: ♀ June 24, 1925, Williams, Arizona (A. A. Nichol); author's collection. *Allotype*: July 3, 1925, Santa Rita Mts., Arizona (A. A. Nichol).

AN UNUSUAL CONDITION FOUND IN COLLECTING WATER BEETLES IN ARIZONA.

BY D. K. DUNCAN, Globe, Arizona.

On the 25th of July, 1926, I motored to the Pinal Mountains, Gila County, Arizona, the base of which is situated some seven miles from Globe, Arizona. Reaching a point ten miles from Globe, Arizona, and at an elevation of some 5,000 feet, I stopped the car where a small creek crosses the highway and proceeded to do some beetle collecting from the shrubs near at hand.

As this creek was dry at the time, having water in it only from January until the latter part of May, I paid no attention to it, and the collection of water beetles was a far thought, as the nearest water would be on top of the mountain some five or six miles away.

Returning to the car for my net I was surprised to hear the sound of what I took to be rain on the car roof. Upon investigating I found not a cloud in the sky and the noise was made by dozens of water beetles hitting the roof every few moments. By standing on the rear fender I was able to gather about ten per cent. of these, as they would hit and bounce, roll over, and rapidly take wing again, also many struck beyond the reach of my arm. Within fifteen minutes I had gathered the following: 3 *Helichus* sp., 2 *Agabus lugens* (Lec.), 1 *Hydroporus pinguis* (Fall.), 1 *Hydroporus vilis* (Lec.), 53 *Deronectes aequinoctialis* (Clk.), 89 *Deronectes striatellus* (Lec.).

As my time was limited and I was obliged to return to Globe by noon, I stopped taking them although they were still coming. The time was 11:05 A. M., bright sunlight and rather hot. Many of the beetles were covered with mud. The question arises as to why they should pick out the car top to alight, unless they mistook it for a pool of water, and also why they should be flying at that time of day. They must have been at quite a height to see the car top.